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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,639	08/16/2006	Toshio Isozaki	294568US0PCT	2292

22850 7590 10/29/2010  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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LACLAIR, DARCY D

ART UNIT	PAPER NUMBER
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1763

NOTIFICATION DATE	DELIVERY MODE
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10/29/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,639	<b>Applicant(s)</b> ISOZAKI ET AL.	
	<b>Examiner</b> Darcy D. LaClair	<b>Art Unit</b> 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 11-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,3,4 and 11-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                                  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/22/2010, 10/22/2010</u> . | 6) <input type="checkbox"/> Other: _____   |

### DETAILED ACTION

1. All outstanding rejections, except for those maintained below are withdrawn in light of the amendment filed on **8/16/2010**.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The new grounds of rejection set forth below are necessitated by applicant's amendment filed on **8/16/2010**. In particular, **Claim 1** has been amended to recite at least one component (E) in an amount of 0.05 to 2 parts by mass where (E) is a metal salt of a perfluoroalkane sulfonic acid or an aromatic vinyl resin containing sulfonate groups. Furthermore, New **Claims 18-26** have been added. The amendments to Claim 1 are supported in previous Claim 7, and on pages 13 par [0027] and 14 par [0029]. The new claims are supported at page 13 par [0027] and [0028], page 15 par [0032], page 19 par [0038] and page 22 par [0043], and page 17 par [0034]. These limitations were not present in the claims at the time of the preceding Office Action. Thus, the following action is properly made **FINAL**.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 23-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

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which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the examples use specific bisphenol A polycarbonate polymers having a molecular weight of 17500 and a second polycarbonate either having the same molecular weight, or the one prepared by Preparation 1. The amorphous styrene resin is specifically an ABS or AS resin, and contain talc, and a very specific PTFE, which contributes to the flame retardance. (See Examples) Claim 1, from which these claims ultimately depend requires only a single polycarbonate resin, a generic amorphous styrene, and a metal salt. Only Example 1, 7 and 8 employ the metal salt, at a concentration of 0.1, not from broadly from 0.05 to 2 parts, (See Table 1) and the metal salt is specifically either potassium perfluoroalkane sulfonate (Ex. 1, 7), or sodium polystyrene sulfonate. (Ex. 8) Based on the support derived from the examples it is not clear that Claims 23-26 have sufficient support from the narrow embodiments shown to support the values which are claimed for the broadly Claimed composition recited in Claim 1. This is based both on the broad recitation of polymers in comparison to the narrowly exemplified polymers, as well as on the requirement for the sulfur containing component in Claim 1, which is not supported by the table at large.

***Claim Rejections - 35 USC § 103***

3. **Claims 1, 3-4, 11-18 and 20-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Okamoto et al. (WO 02/36687 A1)** in view of **Meyer et al. (US 2004/0030090)** and **Reinert et al. (US 4,303,575)**

It is noted that the international Patent Application WO publication is being utilized for date purposes. However, since **WO 02/36687** in Japanese, in the discussion below, the US equivalent for **WO 02/36687**, namely **US 2004/0030044**) is referred to in the body of the rejection below. All column and line citations are to the US equivalent.

**With respect to Claims 1 and 12**, Okamoto teaches a polycarbonate resin composition for parts such as home and office appliances, telephones, automobile parts, and the like (see par [0180]), having a resin mixture having 1 to 99 percent by weight of a polycarbonate based resin and from 1 to 99 parts by weight of a styrenic resin. (See par [0158]) Okamoto teaches that the polycarbonate component (see par [0159]) includes a terminal modified polycarbonate prepared from dihydroxydiphenyls (see par [0063]), consistent with applicant's (A-1) and other polycarbonate copolymers such as polycarbonate polyorganosiloxane copolymer, consistent with applicant's (A-2). (See par [0133]) Okamoto exemplifies the terminal modified polycarbonate to polycarbonate-polyorganosiloxane ratio as 75:25, 50:25, (See Table II-1-(1)) 65:25, 10:80, 50:40 (See Table II-2-(1)) and other ratios falling within applicant's required relationships for component (A-1) and component (A-2). (See Table III-1, III-3) The styrene resins are acrylonitrile-styrene copolymers (AS), (see par [0161]) or rubber modified styrene resins such as ABS resins, MBS resins, (see par [0162], [0164])

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having between 2 and 50% weight of rubber modifying them. (See par [0163]) This is consistent with an amorphous styrene. The composition additionally contains from 0.2 to 5 parts by weight of a functional group having silicone compound. (See par [0171]-[0172]) Further, Okamoto teaches that typical additives to improve the properties of the composition, such as flame retardants, and flame retardation promoters can be added to the composition. (See par [0086], [0177]) Furthermore, Okamoto desires to reduce or eliminate the halogen and/or phosphorous containing flame retardants. (See [0400]) Okamoto does not explicitly teach a content of dihydroxybiphenyl in the terminal modified polycarbonate or the use of a metal salt of perfluoroalkane sulfonic acid or aromatic vinyl resin containing sulfonate groups.

Meyer teaches polycarbonates with special terminal groups, and processes for producing such resins. (See abstract) These resins are composed of phenolic compounds including diphenols such as dihydroxybiphenyls, (see par [0078]), with 4,4'-dihydroxybiphenyl (DOD) as a preferred diphenol (see par [0079]). Meyer exemplifies as a co-polycarbonate which contains 0.14 mole of bisphenol A, 0.06 mole of dihydroxybiphenyl, 0.223 mole of diphenyl carbonate, 0.0028 mole of additional compounds. (See Example 11, par [0192]-[0193]) This is a total of 0.4258 moles; with 0.06 moles of dihydroxybiphenyl, Meyer's compound contains 14.1 mol% of dihydroxybiphenyl, which is within applicant's claimed range. Meyer teaches that these polycarbonates do not exhibit high zero sheer viscosity or undergo degradation under thermal stress such as extrusion or injection molding (see par [0018]) and can be mixed with other thermoplastics, and processed into molded articles or extrudates. (See par

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[0117]) They are particularly applicable for safety panels for vehicles and aircraft, production of fibres and threads, production of molded articles and precision injection molded parts, production of optical instrument parts, mobile telephone housings, applications in the automobile sector. (See par [0119]-[0148]) This is consistent with Okamoto's use of the polycarbonate. Furthermore, it would be obvious to employ the terminal modified polycarbonate of Meyer as the terminal modified polycarbonate described by Okamoto in order to enjoy the benefit of the decreased viscosity which would improve the processing and injectibility of the resin, as well as the improved thermal stress resistance, which would allow the composition to be processed via injection molding or extrusion with less risk of degradation.

Reinert teaches a flame retardant polycarbonate composition having polycarbonate resin, a perfluoroalkane sulfonate, and a halogenated aromatic anhydride. The perfluoroalkane salts useful in the practice are potassium or sodium (M=Na or K) perfluoroalkane sulfonates having from 1 to 8 carbon atoms ( $a = 1$  to 8), and as these are salts, the number of perfluoroalkane sulfonate groups would necessarily be consistent with the valence of the alkali or alkaline metal. These are incorporated at a level of 0.01 to 1 percent by weight based on the weight of the polycarbonate component. (See col 3 line 46 - col 4 line 2) Polycarbonate compositions having this composition exhibit suppressed molten dripping and a V-rating on the UL 94 test, which is good flame resistance. It would be obvious to one of ordinary skill in the art to use the alkali metal sulfonates of Reinert in the composition of Okamoto in order to increase the resistance to burning while maintaining a reduction or

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absence of halogen and/or phosphorous containing flame retardants, and to realize improved flame retardance provided by this known additive.

**With respect to Claims 3 and 4**, Okamoto teaches that the polycarbonate-polyorganosilixane copolymer is prepared by dissolving a polycarbonate oligomer and a polyorganosiloxane having a reactive group at its terminal, such as polydimethylsiloxane. (See par [0133])

**With respect to Claim 11**, Okamoto teaches that moldings of the resin composition are prepared and used in various housings and parts. (See par [0180])

**With respect to Claim 13 and 15**, Okamoto teaches that the composition contains inorganic filler from 2 to 50 parts by weight per 100 parts by weight of the resin mixture. (See par [0176])

**With respect to Claim 14 and 16**, Okamoto teaches a core/shell type grafted rubber elastomer for use in the composition (see par [0143],[0144]) which acts as a impact resistance improver due to its rubber-like properties. This is present in 0.2 to 10 parts by weight relative to 100 parts by weight of the polycarbonate based resin. (See par [0149])

**With respect to Claim 17**, the functional group having silicone has the basic structure of formula  $R^1_a R^2_b SiO_{(4-a-b)/2}$ , where R1 is a functional group, and R2 is a hydrocarbon residue having from 1 to 12 carbon atoms, and  $0 < a \leq 3$ ,  $0 < b \leq 3$  and  $0 < a+b \leq 3$ . The functional group is an alkoxy group, an aryloxy group, a polyoxyalkylene group, a hydride residue, a hydroxyl group, a carboxyl group, a silanol group, an amino group, a mercapto group, an epoxy group. (See par [0138])



**With respect to Claim 18**, the perfluoroalkane sulfonate salts of Reinert (see the discussion of Claims 1 and 12, above) include potassium perfluoroalkane sulfonate compounds. The alkanes are butane, methylbutane, octane, methane, ethane, propane, hexane, and heptane. (See col 3 line 46-55)

**With respect to Claim 20**, Okamoto teaches that the composition is melted and kneaded at 280°C, and dried at 120°C. (See par [0205]) Thus it appears that the heat deformation temperature is above 120°C and below 280°C, which is above 110°C, as required.

**With respect to Claim 21**, Okamoto teaches a melt flowability of 44-47 g/10 min for the compositions. (See Table II-1(1)) The modifications of Meyer, discussed above with respect to Claim 1 and 12, provide decreased viscosity for improved processing and injectability. Taken in combination, it is the examiner's position that a spiral flow length of 35 or greater would be achieved by the combination of Okamoto and Meyer.

**With respect to Claim 22 and 26**, the flame retardant compounds of Reinert give a V-0 rating on the UL 94 test. (See the discussion of Claims 1 and 12, above) Although Reinert does not explicitly report a limiting oxygen index, it is the examiner's position that with the use of 0.01 to 1 percent by weight of Reinert's perfluoroalkane sulfonate salts used in the composition of Okamoto, a LOI of 39-41 would be expected.

**With respect to Claim 23-25**, Okamoto teaches an IZOD impact strength of between 55 and 60 (see p. 15, Table II-1(1)) and between 67 and 70 (See Table III-4) Furthermore, the composition contains from 1 to 99 parts by weight of an amorphous styrenic resin (see par [0158]) such as acrylonitrile-styrene copolymers (AS), (see par

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[0161]) or rubber modified styrene resins such as ABS resins, MBS resins, (see par [0162], [0164]) having between 2 and 50% weight of rubber modifying them. (See par [0163]) This would provide good flexural strength and modulus. It is the examiner's position that flexural strength and modulus values consistent with those required by applicant's claims would be expected.

4. **Claims 1, 3-4 and 11-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Okamoto et al. (WO 02/36687 A1)** in view of **Meyer et al. (US 2004/0030090)** and **Nodera et al. (WO 02/057369 A1)**

It is noted that the international Patent Application WO publications are being utilized for date purposes. However, since **WO 02/36687** and **WO 02/057369** are in Japanese, in the discussion below, the US equivalents, namely **US 2004/0030044** and **US 2004/0059068**, respectively, are referred to in the body of the rejection below. All column and line citations are to the US equivalent.

**With respect to Claims 1 and 12**, Okamoto teaches a polycarbonate resin composition for parts such as home and office appliances, telephones, automobile parts, and the like (see par [0180]), having a resin mixture having 1 to 99 percent by weight of a polycarbonate based resin and from 1 to 99 parts by weight of a styrenic resin. (See par [0158]) Okamoto teaches that the polycarbonate component (see par [0159]) includes a terminal modified polycarbonate prepared from dihydroxydiphenyls (see par [0063]), consistent with applicant's (A-1) and other polycarbonate copolymers such as polycarbonate polyorganosiloxane copolymer, consistent with applicant's (A-2).

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(See par [0133]) Okamoto exemplifies the terminal modified polycarbonate to polycarbonate-polyorganosiloxane ratio as 75:25, 50:25, (See Table II-1-(1)) 65:25, 10:80, 50:40 (See Table II-2-(1)) and other ratios falling within applicant's required relationships for component (A-1) and component (A-2). (See Table III-1, III-3) The styrene resins are acrylonitrile-styrene copolymers (AS), (see par [0161]) or rubber modified styrene resins such as ABS resins, MBS resins, (see par [0162], [0164]) having between 2 and 50% weight of rubber modifying them. (See par [0163]) This is consistent with an amorphous styrene. The composition additionally contains from 0.2 to 5 parts by weight of a functional group having silicone compound. (See par [0171]-[0172]) Further, Okamoto teaches that typical additives to improve the properties of the composition, such as flame retardants, and flame retardation promoters can be added to the composition. (See par [0086], [0177]) Furthermore, Okamoto desires to reduce or eliminate the halogen and/or phosphorous containing flame retardants. (See [0400]) Okamoto does not explicitly teach a content of dihydroxybiphenyl in the terminal modified polycarbonate or the use of a metal salt of perfluoroalkane sulfonic acid or aromatic vinyl resin containing sulfonate groups.

Meyer teaches polycarbonates with special terminal groups, and processes for producing such resins. (See abstract) These resins are composed of phenolic compounds including diphenols such as dihydroxybiphenyls, (see par [0078]), with 4,4'-dihydroxybiphenyl (DOD) as a preferred diphenol (see par [0079]). Meyer exemplifies as a co-polycarbonate which contains 0.14 mole of bisphenol A, 0.06 mole of dihydroxybiphenyl, 0.223 mole of diphenyl carbonate, 0.0028 mole of additional

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compounds. (See Example 11, par [0192]-[0193]) This is a total of 0.4258 moles; with 0.06 moles of dihydroxybiphenyl, Meyer's compound contains 14.1 mol% of dihydroxybiphenyl, which is within applicant's claimed range. Meyer teaches that these polycarbonates do not exhibit high zero shear viscosity or undergo degradation under thermal stress such as extrusion or injection molding (see par [0018]) and can be mixed with other thermoplastics, and processed into molded articles or extrudates. (See par [0117]) They are particularly applicable for safety panels for vehicles and aircraft, production of fibres and threads, production of molded articles and precision injection molded parts, production of optical instrument parts, mobile telephone housings, applications in the automobile sector. (See par [0119]-[0148]) This is consistent with Okamoto's use of the polycarbonate. Furthermore, it would be obvious to employ the terminal modified polycarbonate of Meyer as the terminal modified polycarbonate described by Okamoto in order to enjoy the benefit of the decreased viscosity which would improve the processing and injectibility of the resin, as well as the improved thermal stress resistance, which would allow the composition to be processed via injection molding or extrusion with less risk of degradation.

Nodera teaches a polycarbonate composition (see par [0041]) having a styrene component (see par [0049]), fibril forming PTFE (see par [0106]) and a reactive silicone compound (see par [0198]) which is similar in composition to that of Okamoto. Nodera teaches that the composition should have an organic metallic salt. This includes organic sulfonic acids and acid-salt-group containing aromatic vinyl based resins. The organic sulfonic acids include compounds such as an alkali metal salt of perfluoroalkane

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sulfonic acids having alkanes of 1 to 8 carbons, an alkali or alkaline earth metal, and as these are salts, the number of perfluoroalkane sulfonate groups would necessarily be consistent with the valence of the alkali or alkaline metal. These in particular include potassium salts of perfluoroalkanesulfonic acids. (See par [0196]) The aromatic vinyl based resins are preferably derived from styrene (see par [0198]) and have a preferred structure consistent with formula III of Claim 1. (See par [0199]) This component is incorporated in the composition in an amount 0.05 to 2% by mass. (See par [0203]) When used in combination with a PTFE component, this allows an improved flame retardancy. (See par [0204]) This is observed in Nodera on p. 19-20 Table III-1. When 0.01 or 1 parts of the organic metallic salt is used, a V-0 rating is achieved. The particular sulfur containing metallic salts are potassium perfluorobutanesulfonate (see par [0232]) and sodium polystyrene sulfonate. (See par [0237]).

It would be obvious to one of ordinary skill in the art to use the alkali metal sulfonates or acid-salt-group containing aromatic vinyl based resins of Nodera in the composition of Okamoto in order to increase the resistance to burning while maintaining a reduction or absence of halogen and/or phosphorous containing flame retardants, and to realize improved flame retardance provided by this known additive.

**With respect to Claims 3 and 4**, Okamoto teaches that the polycarbonate-polyorganosilixane copolymer is prepared by dissolving a polycarbonate oligomer and a polyorganosiloxane having a reactive group at its terminal, such as polydimethylsiloxane. (See par [0133])

**With respect to Claim 11**, Okamoto teaches that moldings of the resin composition are prepared and used in various housings and parts. (See par [0180])

**With respect to Claim 13 and 15**, Okamoto teaches that the composition contains inorganic filler from 2 to 50 parts by weight per 100 parts by weight of the resin mixture. (See par [0176])

**With respect to Claim 14 and 16**, Okamoto teaches a core/shell type grafted rubber elastomer for use in the composition (see par [0143],[0144]) which acts as a impact resistance improver due to its rubber-like properties. This is present in 0.2 to 10 parts by weight relative to 100 parts by weight of the polycarbonate based resin. (See par [0149])

**With respect to Claim 17**, the functional group having silicone has the basic structure of formula  $R^1_a R^2_b SiO_{(4-a-b)/2}$ , where R1 is a functional group, and R2 is a hydrocarbon residue having from 1 to 12 carbon atoms, and  $0 < a \leq 3$ ,  $0 < b \leq 3$  and  $0 < a+b \leq 3$ . The functional group is an alkoxy group, an aryloxy group, a polyoxyalkylene group, a hydride residue, a hydroxyl group, a carboxyl group, a silanol group, an amino group, a mercapto group, an epoxy group. (See par [0138])

**With respect to Claim 18**, the potassium salts of perfluoroalkanesulfonic acids (or potassium perfluoroalkane sulfonates) of Nodera (see the discussion of Claims 1 and 12, above) include alkanes such as methane, ethane, propane, butane, methylbutane, hexane, heptane, and octane. (See par [0196])

**With respect to Claim 19**, the exemplified aromatic vinyl containing sulfonate group of Nodera (see discussion of Claims 1 and 12, above) is sodium polystyrene sulfonate. (See par [0237]).

**With respect to Claim 20**, Okamoto teaches that the composition is melted and kneaded at 280°C, and dried at 120°C. (See par [0205]) Thus it appears that the heat deformation temperature is above 120°C and below 280°C, which is above 110°C, as required.

**With respect to Claim 21**, Okamoto teaches a melt flowability of 44-47 g/10 min for the compositions. (See Table II-1(1)) The modifications of Meyer, discussed above with respect to Claim 1 and 12, provide decreased viscosity for improved processing and injectability. Taken in combination, it is the examiner's position that a spiral flow length of 35 or greater would be achieved by the combination of Okamoto and Meyer.

**With respect to Claim 22 and 26**, the flame retardant compounds of Nodera give a V-0 rating on the UL 94 test. (See the discussion of Claims 1 and 12, above) Although Nodera does not explicitly report a limiting oxygen index, it is the examiner's position that with the use of 0.01 to 1 percent by weight of Noderas's organic compound metallic salt as described, used in the composition of Okamoto, a LOI of 39-41 would be expected.

**With respect to Claim 23-25**, Okamoto teaches an IZOD impact strength of between 55 and 60 (see p. 15, Table II-1(1)) and between 67 and 70 (See Table III-4) Furthermore, the composition contains from 1 to 99 parts by weight of an amorphous styrenic resin (see par [0158]) such as acrylonitrile-styrene copolymers (AS), (see par

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[0161]) or rubber modified styrene resins such as ABS resins, MBS resins, (see par [0162], [0164]) having between 2 and 50% weight of rubber modifying them. (See par [0163]) This would provide good flexural strength and modulus. It is the examiner's position that flexural strength and modulus values consistent with those required by applicant's claims would be expected.

### ***Response to Arguments***

5. Applicant's arguments filed **8/16/2010** have been fully considered. Specifically, applicant argues

(A) Claim 1 recites polycarbonate having at least one component (E) in addition to components (A), (B), and (F) which is an alkali/alkaline earth metal salt of a perfluoroalkane sulfonic acid and/or an aromatic vinyl resin containing sulfonate groups. This composition has improved flame retardance to the polycarbonate resin composition. None of Okamoto, Meyer, and Laughner '686 disclose these sulfur containing components, and thus do not render the instant invention obvious. Laughner '686 generically discloses the inclusion of "metal salts of aromatic sulfonates, sulfates, sulfonamides, sulfimides, etc.," but does not disclose either of the specific formulas now claimed. In addition, the specification provides evidence of enhanced (V-0) flame retardance when using these metal salts while maintaining the desired levels of spiral flow length, Impact strength, heat deformation temperature, flexural strength, flexural modulus, and limiting oxygen index. Thus applicant's request withdrawal of the rejection over Okamoto, Meyer, and Laughner '686.



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6. **With respect to argument (A)**, applicant's arguments have been considered and the rejection over Okamoto, Meyer, and Laughner '686 has been withdrawn ***in light of applicant's amendment***. However attention is directed to the 112 second paragraph rejection and prior art rejections set forth above.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darcy D. LaClair whose telephone number is (571)270-5462. The examiner can normally be reached on Monday-Friday 8:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Milton I. Cano/  
Supervisory Patent Examiner, Art Unit 1763

Darcy D. LaClair  
Examiner  
Art Unit 1763

/DDL/